

A NEW SPECIES AND A NEW RECORD SPECIES OF THE GENUS TERRILIMOSINA (DIPTERA, SPHAEROCERIDAE) FROM CHINA

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Abstract *Terrilimosina apriomis* Su et Liu, sp. nov. is described from Maoer Mountain, Guangxi, and *T. nana* Hayashi, 1992 is newly recorded for China.

Key words *Terrilimosina*, new species, Sphaeroceridae, China.

1 Introduction

Sphaeroceridae is a relatively large family with more than 1 300 known species, these species are the most common acalyptrate insects associated with decaying organic materials and almost occur in all terrestrial habitats throughout the world. However, there are more than 50 known species in China fauna at the present time, including more than 20 species from Hong Kong, Macao and Taiwan. We here record 2 species from China, in which one species is new to science, the other is a species newly recorded for China.

2 Materials and Methods

The specimens were collected with sweep nets in Bailang and Maoer Mountains and put in ethanol vials. Genitalic preparations were made by clearing entire abdomens in hot 10% KOH. When finished, all specimens examined were transferred to vials with glycerine. All the specimens studied are deposited in Shenyang University, Shenyang.

Morphological terminology follows that of Marshall (1987).

3 Taxonomy

Terrilimosina nana Hayashi, 1992 New record to China (Figs. 1-6)

Diagnosis. Body generally black. Male mid tibia with an anteroventral bristle below the middle (Fig. 1). Sternite 5 (Fig. 6) with a membranous, posteromedial lobe, which bears setulae; flanked by 2 rows of spine-like bristles. Surstylus (Fig. 4) with a small anterior and a large posterior lobes; posterior lobe with scale-like marginal spines.

Description. Male. Body length 1.56 mm, wing length 1.56 mm.

Head. Black. Orbital bristles in 2 pairs. Interfrontal

bristles in 4 pairs, the upper 3 pairs subequal in length, the lowest short and thin. Eyes bare, its height 2 times genal height. Postvertical bristle absent. Genal bristle small, genal setula 1. Face shiny black, antenna and arista black. Aristal hairs short, the longest hairs 2.5 times as long as the aristal width at base. Palpus brownish black.

Thorax. Black. Humeral bristles 2, the internal small. Dorsocentral bristle 0 + 1. Only prescutellar acrostichal bristle slightly enlarged, 8 rows of acrostichal setulae in front of suture. Katepisternum with 2 bristles, the anterior weak, the posterior strong. Scutellum black, scutellar disc bare, marginal bristles in 2 pairs.

Legs. Brownish black. Mid tibia with a proximal anterodorsal bristle, a distal anterodorsal, a distal dorsal and a distal posterodorsal, a small anterodorsal in front of proximal anterodorsal, a small dorsal bristle in front of distal dorsal, an anteroventral below middle, a small anteroapical, its length 3/4 as long as the apical width of mid tibia, a long ventroapical (Figs. 1-2).

Wing. Brown, veins dark brown. Costa extended beyond R_{4+5} , first costal sector with slightly dense and short setulae, and 2 basal bristles, the second costal sector 0.96 times as long as the third. R_{2+3} sharply bent up to costa, R_{4+5} sinuate before tip of wing. Appendage of M_{1+2} overpassing ϕ , discal cell rounded on posterior outer corner, $r-m$ and $m-cu$: $m-cu$ = about 3. Anal vein sinuate. Alula large and slightly narrow, apical rounded. Halter light yellow.

Abdomen. Ovale. Tergites 1 to 5 dark brown; synsternite 1 + 2 dark brown posteromedially, the rest yellowish white, sternites 3 to 4 dark brown, sternite 5 black; postabdomen black. Sternite 5 posteromedially with membranous lobe bearing setulae; 2 rows of spine-like bristles flanked by the posteromedial lobe (Fig. 6). Epandrium without long dorsolateral bristle, with slightly

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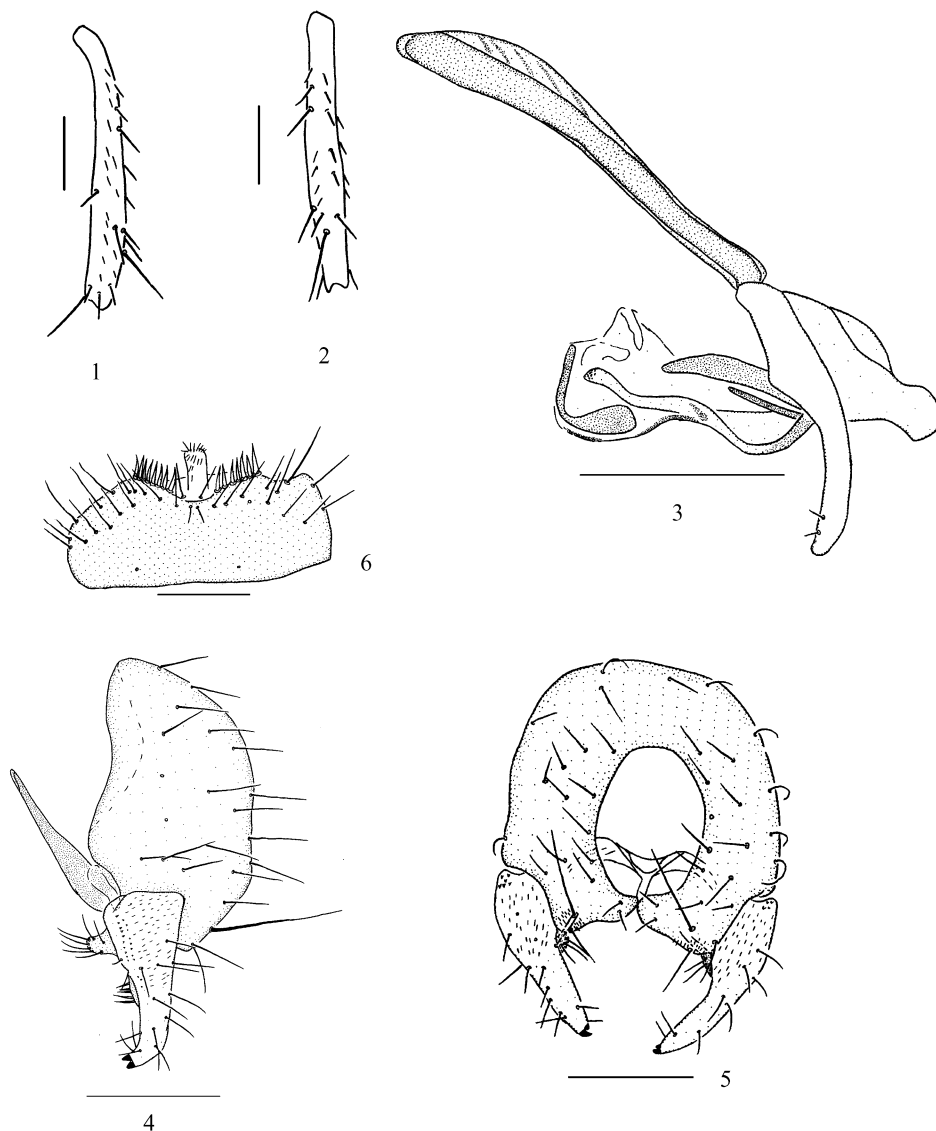
sparse and short bristles (Figs. 4-5). Cercus with a long bristle (Figs. 4-5). Surstylus with a small anterior part, a large posterior part; the anterior part with setulae; the posterior part with scale-like spines at apex, anteromedially with spine-like bristles, posterolaterally with several bristles, dorsolaterally with setae (Fig. 4). Basiphallus relatively large and apically blunt, overpassing distiphallus ventrally (Fig. 3). Paramere very long, apically rounded, predistal part with small setae (Fig.

3).

Material examined. 1 ♂, China, Liaoning Province, Bailang Mountain, 1 140.02 m, 27 May 2008, SU Li Xin.

Distribution. China (Liaoning), Japan.

Discussion. The species is here recorded from China for the first time, which was previously recorded in Japan. It is easily identified by characteristic sternite 5 and surstylus.



Figs. 1-6. *Terilimosina nana*. 1. Male left mid tibia, anterior. 2. Male left mid tibia, dorsal. 3. Aedeagus and associated parts, lateral. 4. Male terminalia, lateral. 5. Male terminalia, posterior. 6. Sternite 5, male. Scale bars= 0.1 mm.

Terilimosina capricornis Su et Liu, sp. nov. (Figs. 7-17)

Diagnosis. Male mid tibia (Figs. 7-8) with an anteroventral bristle below the middle, and with a row of posterodorsal setula-like bristles. Male sternite 5 (Fig. 13) with a semicircular, small setae area. Surstylus (Figs. 11-12) with a lateral lobe bearing setose and several unequal bristles, posteroventrally with a small and

slightly blunt process at apex; with a finger-like, relatively long anterior lobe; with a relatively short posterior lobe bearing marginal spines. Female tergite 8 (Fig. 16) tripartite pigmentation, median part pale and narrow, lateral parts setulose at distal half, ventrolateral lobes shining black. Spermathecae (Fig. 15) cup shaped, invagination deep.

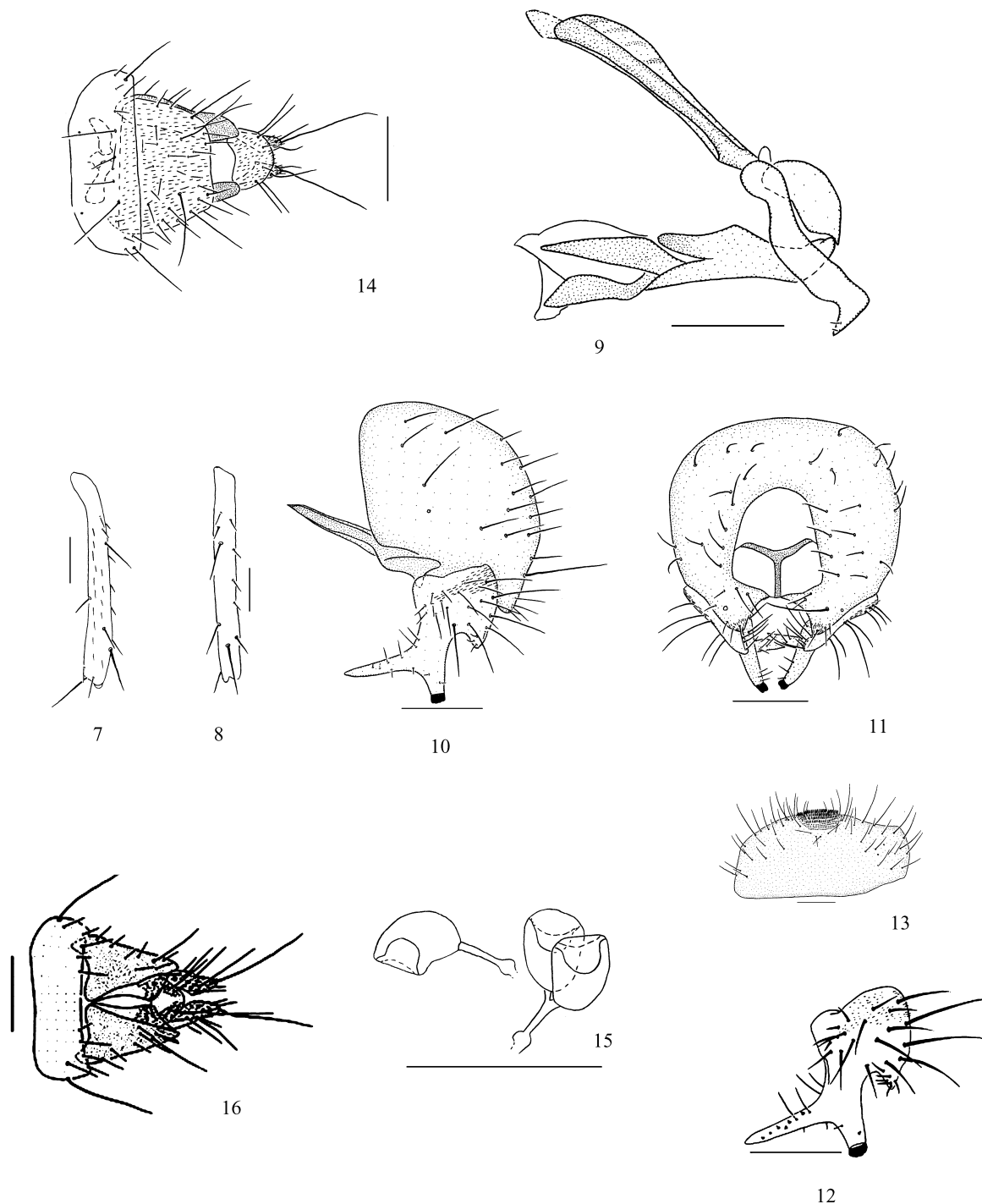
Etymology. The specific name is named for surstylus, which is sheep horn shaped.

Description. Male. Body length 2.22-2.30 mm, wing length 2.07-2.19 mm.

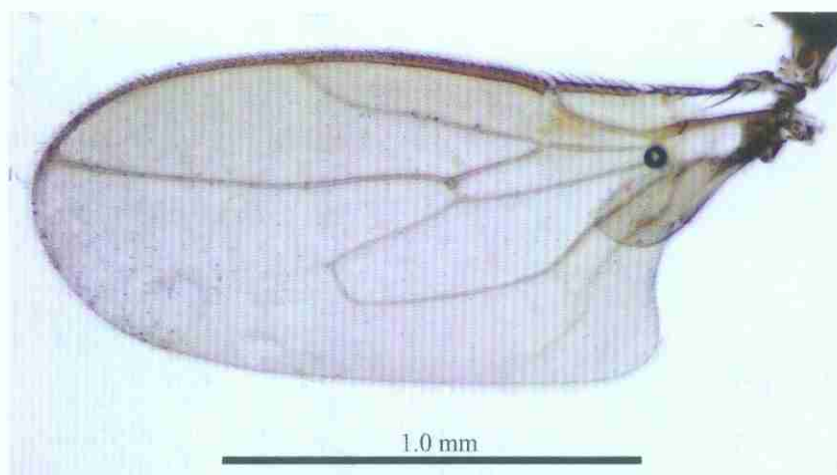
Head. Black. Orbital bristles in 2 pairs. Interfrontal bristles in 4 pairs, the upper 3 pairs subequal in length, the lowest short and thin. Eyes bare, its height 3 times as long as genal height. Postvertical bristle absent. Genal bristle small, genal setula 1. Face, antenna and arista

black. Arista hairs short, the longest hairs 2.5 times as long as the arista width at base. Palpus light yellow.

Thorax. Shiny black. Lateral and posterior margins on scutum dark brown. Humeral bristles 2, the internal small. Dorsocentral bristles 0+2, the anterior small and indistinct, the posterior long and large, somewhat longer than internal postalar bristle. Acrostichal bristle



Figs 7-16 *Terilimosina capriomis* Su et Liu, sp. nov. 7. Male left mid tibia, anterior. 8. Male left mid tibia, dorsal. 9. Aedeagus and associated parts, lateral. 10. Male terminalia, lateral. 11. Male terminalia, posterior. 12. Surstylus, lateral. 13. Sternite 5, male. 14. Female terminalia, ventral. 15. Spermathecae. 16. Female terminalia, dorsal. Scale bars= 0.1 mm



Figs 17. *Terrilimosina capricornis* Su & Liu, sp. nov., Wing.

indistinct, only prescutellar acrostichal bristle slightly enlarged, 8 irregular rows of acrostichal setulae in front of suture. Katepisternum with 2 bristles, the anterior weak, the posterior strong. Scutellum shiny black, scutellar disc bare, marginal bristles in 2 pairs.

Legs. Brownish red to dark brown. Mid tibia with a proximal anterodorsal bristle, a distal anterodorsal, a distal dorsal and a distal posterodorsal, 1-2 small anterodorsal in front of proximal anterodorsal, an anteroventral below middle, a long apical anteroventral, a small anteroapical, its length subequal to apical width of mid tibia, a row of 4 posterodorsal setula-like bristles (Figs. 7-8).

Wing. Light brown, veins brown. Costa extended beyond R_{4+5} , first costal sector with slightly dense and short setulae, and 2 basal bristles, second costal sector 0.97 times as long as the third. R_{2+3} less sharply bent up to costa; R_{4+5} sinuate before tip of wing. Appendage of M_{1+2} overpassing tip, discal cell rounded on posterior outer corner, $r-m$ $dm-cu$: $dm-cu$ = about 3. Anal vein sinuate. Alula large and rounded. Halter light brownish white stem and brown knob.

Abdomen. Length 1.19 mm, width 0.58 mm. Tergites 1 to 5 dark brown; synsternite 1+2 with several brown areas on posterior half part, the rest yellowish brown; sternites 3 to 4 dark brown, sternite 5 black; postabdomen black. Sternite 5 long and wide, twice as long as sternite 4; posteromedially with semicircular area bearing dense and small setulae; these setulae enlarged at apex of semicircular area (Fig. 13). Epandrium with slightly sparse and short bristles. Cercus with a long bristle (Figs. 10-11). Surstylus has three parts; lateral part rectangular, posteroventrally with a small process, laterally with setose at base and long bristles, anteroventrally with anterior and posterior parts; anterior part long, narrow, with small setae and setulae; posterior part short, apically with marginal spines (Fig.

12). Paramere long, apically curved and pointed (Fig. 9). Bsiphallus short, not extending distiphallus ventrally (Fig. 9). Distiphallus long (Fig. 9).

Female. Body length 2.22 mm, wing length 2.15 mm. General color shiny black. Tergite 8 with tripartite pigmentation, narrow median part pale, lateral parts with setulose at distal half, ventrolateral lobes shining black; epiproct slightly broader than long, median part pale and bare, lateral part with setulae and 2 long bristles (Fig. 16). Sternite 8 simple, broader than long, entirely setulose and unequal bristles, 2.38 times as long as hypoproct; hypoproct slightly broader than long, entirely setulose, shallow concave anteriorly. Spectacles-shaped sclerite with lightly sclerotized rings and a small median piece (Fig. 14). Spermathecae cup shaped, invagination deep, about 130 degrees from duct (Fig. 15).

Holotype ♂, China, Guangxi Zhuang Autonomous Region, Maoer Mountain, 1 800 m, 14 May 2004, LIU Guang Chun. Paratypes: 1 ♂, 1 ♀, same data as holotype.

Distribution. China (Guangxi).

Comments. The species is similar to *Terrilimosina brevipeza* Marshall, 1987, but can be separated by the shape of sternite 5 and the characteristic surstylus.

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中国陆小粪蝇属新种和一新纪录种 (双翅目, 小粪蝇科)

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摘 要 记述中国陆小粪蝇属 *Terrilimosina* Roháček 2 种, 其中产自广西猫儿山的 1 新种: 羊角陆小粪蝇 *T. capricornis* Su & Liu, sp. nov. 和产自辽西的 1 新纪录种: 短陆小粪蝇 *T. nana* Hayashi, 1992 (图 1~ 6)。新种模式标本和检查标本均保存于沈阳大学。

短陆小粪蝇 *Terrilimosina nana* Hayashi, 1992 中国新纪录种 (图 1~ 6)

新纪录种之前仅在日本分布记录。该记录种雄虫第 5 腹板具膜子的中后瓣, 上有小刚毛; 中后瓣两侧有刺状鬃列。侧尾叶双瓣, 前瓣小, 后瓣明显大, 且后瓣具缘刺。

观察标本 1 ♂, 辽宁白狼山, 海拔 1 140. 02 m, 2008 05

关键词 陆小粪蝇属, 新种, 小粪蝇科, 中国.

中图分类号 Q969. 463. 5

27, 苏立新采。

羊角陆小粪蝇, 新种 *Terrilimosina capricornis* Su & Liu, sp. nov. (图 7~ 17)

新种与 *Terrilimosina brevipexa* Marshall, 1987 相似, 但雄虫第 5 腹板中后部有 1 半圆形区域, 上有小刚毛。侧尾叶侧瓣有小的刚毛和不等长的鬃, 后腹有 1 小而钝的端突; 前瓣指状, 略长; 后瓣略短, 具缘刺。

正模 ♂, 广西猫儿山, 海拔 1 800 m, 2004 05 14, 刘广纯采; 副模 1 ♂, 1 ♀, 采集信息同正模。

词源: 新种的种加词由 *apri-* 和 *cornis* 两部分组成, 意指新种的侧尾叶侧面观似羊角。

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